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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,304

11/14/2003

Byung-in Ma

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8870

7590

11/14/2006

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EXAMINER

NGUYEN, LINH THI

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/712,304	Applicant(s) MA ET AL.	
	Examiner Linh T. Nguyen	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-38 is/are pending in the application.
4a) Of the above claim(s) 11-19 and 28-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 20-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species I in the reply filed on August 23, 2006 is acknowledged. The traversal is on the ground(s) that Species I are linked to the claims of Species III, which recite a combination including an RRU demodulator and an ROM-PIC demodulator. This is not found persuasive because Fig. 6 and Fig. 8, clearly has different structure and functional operation. Therefore, they cannot be linked together, and a burden would be on the examiner if restriction were not applied.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 20-22 are rejected under 35 U.S.C. 102(b) as being unpatentable by Kobayashi (US Patent Number 6097695).

In regards to claims 1 and 20, Kobayashi discloses an apparatus and method for reproducing information from an optical information storage medium which comprises a lead-in area, a user data area, and a lead-out area (Fig. 11), whereon optical information storage medium-related information is recorded in at least a portion of the lead-in area and reproduction-related user data are recorded in a remaining area of the

optical information storage medium (Fig. 10), the apparatus comprising: a light source which radiates a laser light beam (Fig. 7, element 13); an objective lens which condenses the laser light beam to be focused on the optical information storage medium (Column 7, lines 13-15); a photodetector which receives the laser light beam reflected from the optical information storage medium and which comprises first and second photodiodes which independently convert a received optical signal into first and second electric signals (Column 7, lines 49-61), respectively; a reproduction-related user (RRU) data demodulator which demodulates the reproduction-related user data from a sum signal of the first and second electrical signals (Column 8, lines 8-19); and a read only memory-permanent information control (ROM-PIC) data demodulator which demodulates the optical information storage medium-related information from the sum signal (Fig. 6, ADIP data are read only information); .

In regards to claims 2 and 21, Kobayashi discloses the optical information reproducing apparatus and method, wherein: the RRU data (user data DU) demodulator reproduces the reproduction-related user data which is recorded on the optical information storage medium according to a run length-limited (RLL) modulation method (Column 13, lines 31-39), and the ROM-PIC data (ADIP data are read only data) demodulator reproduces the optical information storage medium-related information which is recorded on the optical information storage medium according to a bi-phase modulation method (Column 15, lines 19-20).

In regards to claims 3 and 22, Kobayashi discloses the optical information reproducing apparatus and method, wherein the RLL modulation method is an RLL (1, 7) modulation method (Column 14, lines 1-7).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-10 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent number 6097695) in view of Ahn (US Publication number 20060203676).

In regards to claim 4, Kobayashi discloses everything that is claimed in claim 1 above. However, Kobayashi does not disclose the RLL modulation method is an RLL (2, 10) modulation method.

In the same field of endeavor, Ahn discloses the RLL modulation method is an RLL (2, 10) modulation method (Paragraph [0018]). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the Kobayashi apparatus of recording/reproducing to include the RLL (2, 10) modulation as taught by Ahn et al. The motivations for doing so would have been to improve the shape of the mark, therefore, improve the recording/reproducing (Paragraph [0011]).

In regards to claims 5 and 22, Kobayashi does not but Ahn discloses the optical information reproducing apparatus and method, wherein the optical information storage medium-related information is recorded as a mark and a space having a length of nT , and a mark and a space having a length of $2nT$, where n is an integer in a range where $2 \leq n \leq 8$ (Paragraph [0016]). The motivation is the same as claim 4 above.

In regards to claim 6, Kobayashi does not but Ahn discloses the optical information reproducing apparatus, further comprising a modulation code detector (Fig. 3, element 3) which detects from the sum signal whether the optical information storage medium comprises a plurality of different modulation codes by detecting the mark and the space having the length of nT , and the mark and the space having the length of $2nT$ (Paragraph [0045], lines 21-23). The motivation is the same as claim 4 above.

In regards to claims 7 and 25, Kobayashi does not but Ahn discloses the optical information reproducing apparatus and method, wherein the optical information storage medium-related information is recorded as a mark and a space having a length of nT , and a mark and a space having a length of $2nT$, where n is an integer in a range where $2 \leq n \leq 8$ (Paragraph [0045], lines 21-23). The motivation is the same as claim 4 above.

In regards to claims 8, 9 and 26, Kobayashi discloses the optical information reproducing apparatus and method, further comprising a modulation code detector

which detects from the sum signal (Fig. 7, element 23) whether the optical information storage medium comprises a plurality of different modulation codes by detecting the mark and the space having the length of nT , and the mark and the space having the length of $2nT$ recorded according to the bi-phase modulation method (Column 5, lines 22-33).

In regards to claims 10 and 27, Kobayashi does not but Ahn discloses the optical information reproducing apparatus and method, further comprising a modulation code detector which detects from the sum signal whether the optical information storage medium comprises a plurality of different modulation codes (Fig. 3, element 3; Paragraph [0045], lines 1-11). The motivation is the same as claim 4 above.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN
November 6, 2006


THANG V. TRAN
PRIMARY EXAMINER